

REMARKS

Summary of the Office Action

Claim 25 stands rejected under 35 U.S.C. § 112, second paragraph, as allegedly being indefinite

Claims 1, 10-12, 15-18 and 20-22 stand rejected under 35 U.S.C. 103(a) as allegedly being unpatentable over *Christopher et al.* (U.S. Patent No. 6,058,013) in view of *Miyagi et al.* (U.S. Patent No. 5,506,755) and further in view of *Biber et al.* (U.S. Patent No. 6,260,610).

Claims 23, 24 and 26-29 stand rejected under 35 U.S.C. 103(a) as allegedly being unpatentable over *Christopher et al.* in view of *Miyagi et al.*

Claim 25 stands rejected under 35 U.S.C. 103(a) as allegedly being unpatentable over *Christopher et al.* in view of *Miyagi et al.* and further in view of *Biber et al.*

Summary of the Response to the Office Action

Applicant has amended independent claims 1 and 15 to more particularly point out and distinctly claim the subject matter of the invention. Further, Applicant has amended claims 1, 10, 15, 25 and 26 to improve their form. Accordingly, Applicant respectfully submits that claims 1, 10-12, 15-18 and 20-29 remain pending for further consideration.

Rejection under 35 U.S.C. §112, second paragraph

Claim 25 stands rejected under 35 U.S.C. §112, second paragraph, as being indefinite. Applicant has amended claim 25 in accordance with the Examiner's comments set forth at Section 3 of the Final Office Action. Applicant respectfully submits that claim 25, as newly-

amended, fully complies with the requirements of 35 U.S.C. §112, second paragraph.

Accordingly, Applicant respectfully requests the rejection under 35 U.S.C. §112, second paragraph, be withdrawn.

The Rejections under 35 U.S.C. § 103(a)

Claims 1, 10-12, 15-18 and 20-22 stand rejected under 35 U.S.C. 103(a) as allegedly being unpatentable over *Christopher et al.* in view of *Miyagi et al.* and further in view of *Biber et al.*, claims 23, 24 and 26-29 stand rejected under 35 U.S.C. 103(a) as allegedly being unpatentable over *Christopher et al.* in view of *Miyagi et al.*, and claim 25 stands rejected under 35 U.S.C. 103(a) as allegedly being unpatentable over *Christopher et al.* in view of *Miyagi et al.* and further in view of *Biber et al.* To the extent that these rejections might be reapplied to the claims as presently amended, they are respectfully traversed as being based on a combination of references that neither teaches nor suggests the novel combination of features recited in the claims.

With regard to independent claims 1, 15 and 23, as newly-amended, Applicant respectfully submits that *Christopher et al.*, *Miyagi et al.* and *Biber et al.*, whether taken separately or in combination, do not teach or suggest a claimed combination including at least a feature that “said second heat radiating pattern formed on the rear surface of said circuit board serves as a grounding electrode for the electronic component.”

The Final Office Action concedes that *Christopher et al.* fails to teach or suggest “fins radiating means and the heat radiating pattern represents a grounding electrode,” but relies upon *Miyagi et al.* to teach “the heat radiating means comprising fins and the heat radiating pattern

serves as the grounding electrode” by citing to col. 6, lines 26-32 of *Miyagi et al.* The cited portion of *Miyagi et al.* discloses that a ground potential can be supplied from a heat radiating fin 7 through a thermal via 4 to a die pad 2c on which a CMOS device 3 is mounted. The Final Office Action appears to suggest the die pad 2c as the claimed “second heat radiating pattern.” Applicant respectfully submits that (1) *Miyagi et al.* does not disclose a heat radiating pattern, and (2) even if the die pad 2c can be used as a heat radiation pattern, the die pad 2c would only correspond to the claimed “first heat radiating pattern,” but not to the claimed “second heat radiating pattern.”

Specifically, as described in col. 9, lines 65-66, *Miyagi et al.* merely uses the die pad 2c in mounting an electronic part. Applicant respectfully submits that *Miyagi et al.* neither teaches nor suggests using the die pad 2c as a heat radiating pattern in its disclosure. Further, even if the die pad 2c can be used as the heat radiating pattern, the die pad 2c would only correspond to the claimed “first heat radiating pattern,” because the die pad 2c is formed on a front surface of a thin-film multi-layer wiring part 2 whereas the claimed “second heat radiating pattern” is formed on the rear surface of the circuit board. In other words, Applicant respectfully submits that *Miyagi et al.* does not teach or suggest the claimed “second heat radiating pattern,” as recited by each of the independent claims 1, 15 and 23.

In addition, the Final Office Action does not rely upon *Christopher et al.* and *Biber et al.* to cure any aspect of the above-noted deficiencies of *Miyagi et al.* Further, Applicant respectfully submits that *Christopher et al.* and *Biber et al.* cannot remedy the deficiencies of *Miyagi et al.*

Accordingly, for at least the reasons set forth above, Applicant respectfully asserts that the rejection of independent claims 1, 15 and 23 should be withdrawn because all of the applied reference, whether taken individually or in combination, do not teach or suggest each and every feature of newly-amended independent claims 1, 15 and 23. MPEP § 2143.03 instructs that "[t]o establish prima facie obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. In re Royka, 409 F.2d 981, 180 USPQ 580 (CCPA 1974)." Further, Applicant respectfully submits that the rejections of claims 10-12, 16-18, 20-22 and 24-29 should also be withdrawn at least because of their dependencies upon respective independent claims 1, 15 and 23, as newly-amended, and for the reasons set forth above.

Without other rejections pending, Applicant respectfully asserts that claims 1, 10-12, 15-18 and 20-29 are in condition for allowance.


Conclusions

In view of the foregoing, Applicant respectfully requests entry of the amendments to place the application in clear condition for allowance or, in the alternative, in better form for appeal. Should the Examiner feel that there are any issues outstanding after consideration of this response, the Examiner is invited to contact Applicant's undersigned representative to expedite prosecution.

Except for issue fees payable under 37 C.F.R. § 1.18, the Commissioner is hereby authorized by this paper to charge any additional fees during the entire pendency of this application including fees due under 37 C.F.R. §§ 1.16 and 1.17 which may be required, including any required extension of time fees, or credit any overpayment to Deposit Account No. 50-0310.

Respectfully submitted,

MORGAN LEWIS & BOCKIUS LLP

By: 

Robert J. Goodell
Reg. No. 41,040

Dated: July 21, 2005

CUSTOMER NO. 009629
MORGAN, LEWIS & BOCKIUS LLP
1111 Pennsylvania Avenue, N.W.
Washington, D.C. 20004
Telephone: (202) 739-3000
Facsimile: (202) 739-3001